

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (withdrawn) A control apparatus of an internal combustion engine comprising:
 - a brake booster for increasing a brake force of a brake by using a negative pressure of an intake pipe employed in the internal combustion engine; and
 - an ignition retarding control means for executing ignition retarding control to retard an ignition timing at a cold start in order to promote an operation to heat a catalyst for cleaning exhausted gas,the control apparatus further comprising a negative pressure recognizing means for recognizing a negative pressure of the intake pipe or a negative pressure of the brake booster,
 - wherein the ignition retarding control means starts the ignition retarding control after a negative pressure recognized by the negative pressure recognizing means decreases to a value equal to or lower than a predetermined value.

2. (original) A control apparatus of an internal combustion engine comprising:
 - a brake booster for increasing a brake force of a brake by using a negative pressure of an intake pipe employed in the internal combustion engine; and
 - an ignition retarding control means for executing ignition retarding control to retard an ignition timing at a cold start in order to promote an operation to heat a catalyst

for cleaning exhausted gas,

wherein the ignition retarding control means starts the ignition retarding control after a predetermined time lapses since a start.

3-4. (canceled)

5. (withdrawn) A control apparatus of an internal combustion engine comprising:

a brake booster for increasing a brake force of a brake by using a negative pressure of an intake pipe employed in the internal combustion engine; and

an ignition retarding control means for executing ignition retarding control to retard an ignition timing at a cold start in order to promote an operation to heat a catalyst for cleaning exhausted gas,

the control apparatus further comprising a negative pressure recognizing means for recognizing a negative pressure of the intake pipe or a negative pressure of the brake booster,

wherein the ignition retarding control means sets the ignition timing's retardation quantity and/or retardation speed on the basis of a negative pressure recognized by the negative pressure recognizing means.

6. (withdrawn) The control apparatus of an internal combustion engine according to claim 5, wherein the ignition retarding control means sets the ignition timing's retardation quantity and/or retardation speed on the basis of a sum of differences

between negative pressures recognized by the negative pressure recognizing means and a predetermined value or a maximum value of the differences.

7. (withdrawn) A control apparatus of an internal combustion engine comprising:

a brake booster for increasing a brake force of a brake by using a negative pressure of an intake pipe employed in the internal combustion engine; and

an ignition retarding control means for executing ignition retarding control to retard an ignition timing at a cold start in order to promote an operation to heat a catalyst for cleaning exhausted gas,

wherein the ignition retarding control means sets the ignition timing's retardation quantity and/or retardation speed on the basis of a time lapsing since a start in the course of the ignition retarding control.

8. (withdrawn) A control apparatus of an internal combustion engine comprising:

a brake booster for increasing a brake force of a brake by using a negative pressure of an intake pipe employed in the internal combustion engine; and

an ignition retarding control means for executing ignition retarding control to retard an ignition timing at a cold start in order to promote an operation to heat a catalyst for cleaning exhausted gas,

the control apparatus comprising:

a negative pressure recognizing means for recognizing a negative pressure of the

intake pipe or a negative pressure of the brake booster; and

a retardation quantity control means for changing a control range of a retardation quantity of the ignition timing in accordance with a negative pressure recognized by the negative pressure recognizing means and/or a load borne by the internal combustion engine.

9. (withdrawn) A control apparatus of an internal combustion engine comprising:

a brake booster for increasing a brake force of a brake by using a negative pressure of an intake pipe employed in the internal combustion engine; and

an ignition retarding control means for executing ignition retarding control to retard an ignition timing at a cold start in order to promote an operation to heat a catalyst for cleaning exhausted gas,

the control apparatus further comprising a negative pressure recognizing means for recognizing a negative pressure of the intake pipe or a negative pressure of the brake booster,

wherein the ignition retarding control means further retards the ignition timing if a predetermined time has lapsed since a start, the internal combustion engine is in an idle operation state and a negative pressure recognized by the negative pressure recognizing means is equal to or lower than a predetermined value.

10. (withdrawn) The control apparatus of an internal combustion engine according to claim 1, wherein the negative pressure recognizing means is a pressure

sensor for detecting a negative pressure of the brake booster.

11. (withdrawn) The control apparatus of an internal combustion engine according to claim 1, wherein the negative pressure recognizing means estimates a negative pressure of the brake booster on the basis of an operating condition of the internal combustion engine.

12.-26. (canceled)

27. (new) The control apparatus of claim 2, wherein the predetermined time represents a period of time beginning at a start of the engine and ending at a time that the negative pressure of the intake pipe reaches a predetermined value.

28. (new) The control apparatus of claim 2, wherein the predetermined time represents a period of time beginning at a start of the engine and ending at a time that the negative pressure of the brake booster reaches a predetermined value.

29. (new) A method of controlling an internal combustion engine, the method comprising:

increasing a brake force of a brake by using a negative pressure of an intake pipe employed in the internal combustion engine; and

executing ignition retarding control to retard an ignition timing at a cold start in

order to promote an operation to heat a catalyst for cleaning exhaust gas,

wherein execution of the ignition retarding control is started after a predetermined time lapses since a start.

30. (new) The method of claim 29 wherein the predetermined time represents a period of time beginning at the start of the engine and ending at a time the negative pressure of the intake pipe reaches a predetermined level.

31. (new) The method of claim 29 wherein the predetermined time represents a period of time beginning at the start of the engine and ending at a time a negative pressure of a brake booster, which performs the increasing of the brake force of the brake, reaches a predetermined level.

32. (new) The method of claim 29 further comprising measuring a time period beginning at the start of the engine and ending at a time when the negative pressure of the intake pipe reaches a predetermined level, and storing the measured time period in a memory for later use as the predetermined time.

33. (new) The method of claim 29 further comprising measuring a time period beginning at the start of the engine and ending at a time when a negative pressure of a brake booster, which performs increasing the brake force of the brake, reaches a predetermined level, and storing the measured time period in a memory for later use as the predetermined time.